

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**BALL RANCH AC15-03, WELD COUNTY, COLORADO**  
**FREMONT PROJECT C022-124**

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500		
AST01@1.5'	09/21/2022	1.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST02@1'	09/21/2022	1'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST03@1.5'	09/21/2022	1.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST04@1'	09/21/2022	1'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST05@1'	09/21/2022	1'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWVB01@8'	09/21/2022	8'	<0.0020	<0.0050	<0.0050	<0.010	<b>0.012</b>	<0.0050	<b>0.0082</b>	<0.50	<50	<50
PWVE01@6'	09/21/2022	6'	<0.0020	0.0078	0.0061	0.028	0.0075	<0.0050	<0.0038	<0.50	<50	<50
SEP01@3'	09/21/2022	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP02@3'	09/21/2022	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SS-CEN 8FT	05/19/2023	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.006	<0.0038	<0.50	<50	<50
SS-E 9FT	05/19/2023	9	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SS-N 9FT	05/19/2023	9	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SS-W 9FT	05/19/2023	9	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY INC.  
BALL RANCH AC15-03, WELD COUNTY, COLORADO  
FREMONT PROJECT C022-124

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@1.5'	09/21/2022	1.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@1'	09/21/2022	1'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST03@1.5'	09/21/2022	1.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST04@1'	09/21/2022	1'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST05@1'	09/21/2022	1'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWVB01@8'	09/21/2022	8'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<b>0.0168</b>	<0.00500
PWVE01@6'	09/21/2022	6'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01@3'	09/21/2022	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP02@3'	09/21/2022	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS-CEN 8FT	05/19/2023	8	<0.00500	<0.00500	<b>0.0219</b>	<0.00500	<0.00500	<0.00500	0.0222	<0.00500	<0.00500	<0.00500	<0.00500	0.04	<b>0.24</b>	<0.00500
SS-E 9FT	05/19/2023	9	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS-N 9FT	05/19/2023	9	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS-W 9FT	05/19/2023	9	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY INC.**  
**BALL RANCH AC15-03, WELD COUNTY, COLORADO**  
**FREMONT PROJECT C022-124**

Sample ID	Sample Date	Depth (ft)	EC (mmhos/cm)	pH	SAR	Boron (mg/L)
COGCC Table 915-1 Limits (Residential SSL)			<4	6 - 8.3	<6	2
AST01@1.5'	09/21/2022	1.5'	2.39	6.66	0.478	0.0615
AST02@1'	09/21/2022	1'	3.06	6.78	0.452	0.0782
AST03@1.5'	09/21/2022	1.5'	0.995	6.72	0.378	0.0379
AST04@1'	09/21/2022	1'	1.74	6.30	0.359	0.0987
AST05@1'	09/21/2022	1'	<b>4.07</b>	7.33	0.499	0.14
PWVB01@8'	09/21/2022	8'	0.834	7.97	1.5	0.198
PWVE01@6'	09/21/2022	6'	0.308	7.94	2.19	0.308
SEP01@3'	09/21/2022	3'	0.297	7.92	0.823	0.173
SEP02@3'	09/21/2022	3'	0.992	7.72	1.13	0.205
SS-CEN 8FT	05/19/2023	8	0.593	7.3	1.33	0.654
SS-E 9FT	05/19/2023	9	0.361	6.91	0.738	1.06
SS-N 9FT	05/19/2023	9	0.728	6.92	3.53	1.25
SS-W 9FT	05/19/2023	9	1.06	6.96	3.36	0.697
BKG 1 8FT	05/19/2023	8	0.26	7.14	0.473	0.73
BKG 2 9FT	05/19/2023	9	0.219	6.93	0.812	1.19
BKG 3 9FT	05/19/2023	9	2.46	6.78	1.92	0.691
BKG 4 8FT	05/19/2023	8	2.05	7.22	2.26	1.41
BKG 5 9FT	05/19/2023	9	3.3	7.41	2.24	0.837

Bold faced values exceed the COGCC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

**TABLE 1**  
**SUMMARY OF METALS IN SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**BALL RANCH AC15-03, WELD COUNTY, COLORADO**  
**FREMONT PROJECT C022-124**

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)	Chromium (VI) (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			0.68	15000	71	3100	400	1500	390	390	23000	0.3
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	46	14	26	0.26	0.8	370	0.00067
125% Max. Background Concentration			3.6	-	-	5.8	17	-	1.5	-	-	-
SS-CEN 8FT	05/19/2023	8	0.804	70.3	<0.242	2.14	4.81	1.7	<0.314	<0.0242	8.11	<0.30
SS-E 9FT	05/19/2023	9	2.52	9.29	<0.245	4.65	2.93	1.07	0.436	0.0383	7.29	<0.30
SS-N 9FT	05/19/2023	9	0.875	6.39	<0.249	4.01	2.3	3.89	<0.324	<0.0249	16.2	<0.30
SS-W 9FT	05/19/2023	9	1.72	62.8	<0.248	4.51	<b>239</b>	1	<b>1.64</b>	0.055	6.7	<0.30
BKG 1 8FT	05/19/2023	8	<b>1.09</b>	<b>111</b>	<0.246	<b>3.63</b>	8.38	3.98	<b>0.333</b>	0.0399	25	<0.30
BKG 2 9FT	05/19/2023	9	<b>1</b>	33.8	<0.257	<b>4.36</b>	13.9	0.796	<b>0.496</b>	0.0458	6.85	<0.30
BKG 3 9FT	05/19/2023	9	<b>0.596</b>	18.2	<0.246	<b>4.64</b>	3.34	0.815	<0.320	0.0477	5.24	<0.30
BKG 4 8FT	05/19/2023	9	<b>2.9</b>	24.3	<0.253	<b>2.74</b>	6.44	1.6	<b>1.18</b>	0.038	14.9	<0.30
BKG 5 9FT	05/19/2023	9	<b>2.25</b>	11.1	<0.245	<b>4.11</b>	6.46	1.31	<b>0.514</b>	0.0455	9.93	<0.30

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

NA - Not analyzed

# Ball Ranch AC 15-03 Tank Battery

Site Investigation  
Rem. #23764

## Legend

⊙ Soil Sample Locations

Proposed  
Excavation Extent:  
20'x20'x9' deep

SS-N  
SS-W SS-CEN. SS-E  
SS-S



# Ball Ranch AC 15-03 Tank Battery

Site Investigation  
Rem. #23764

**Legend**

- ⊙ Soil Sample Locations

BKG 4

BKG 5

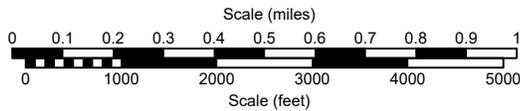
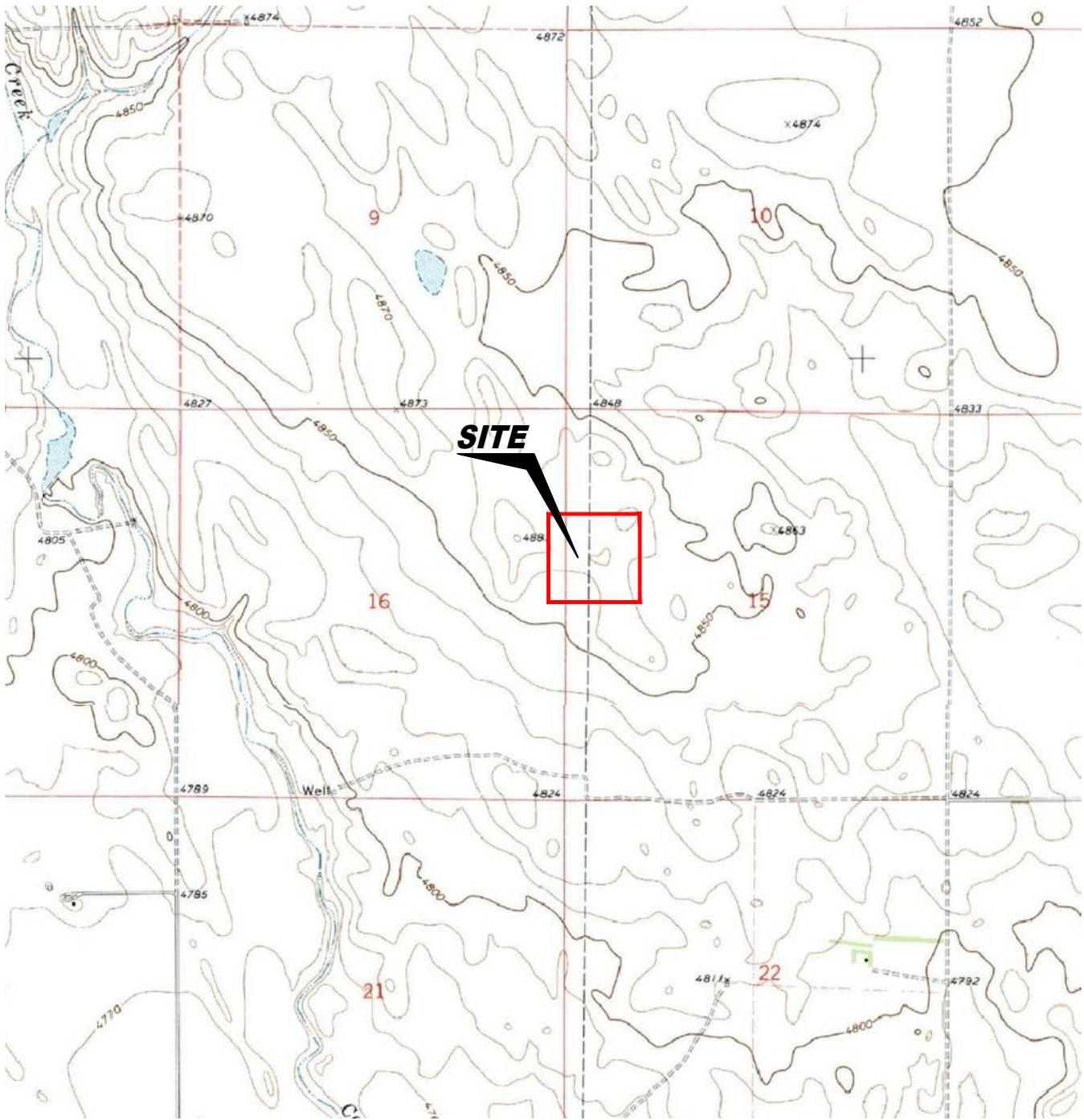
SS N  
SS E  
SS GEN  
SS S

BKG 3

BKG 1

BKG 2





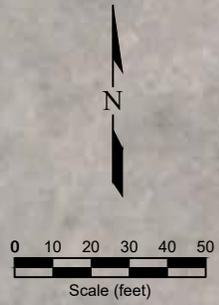
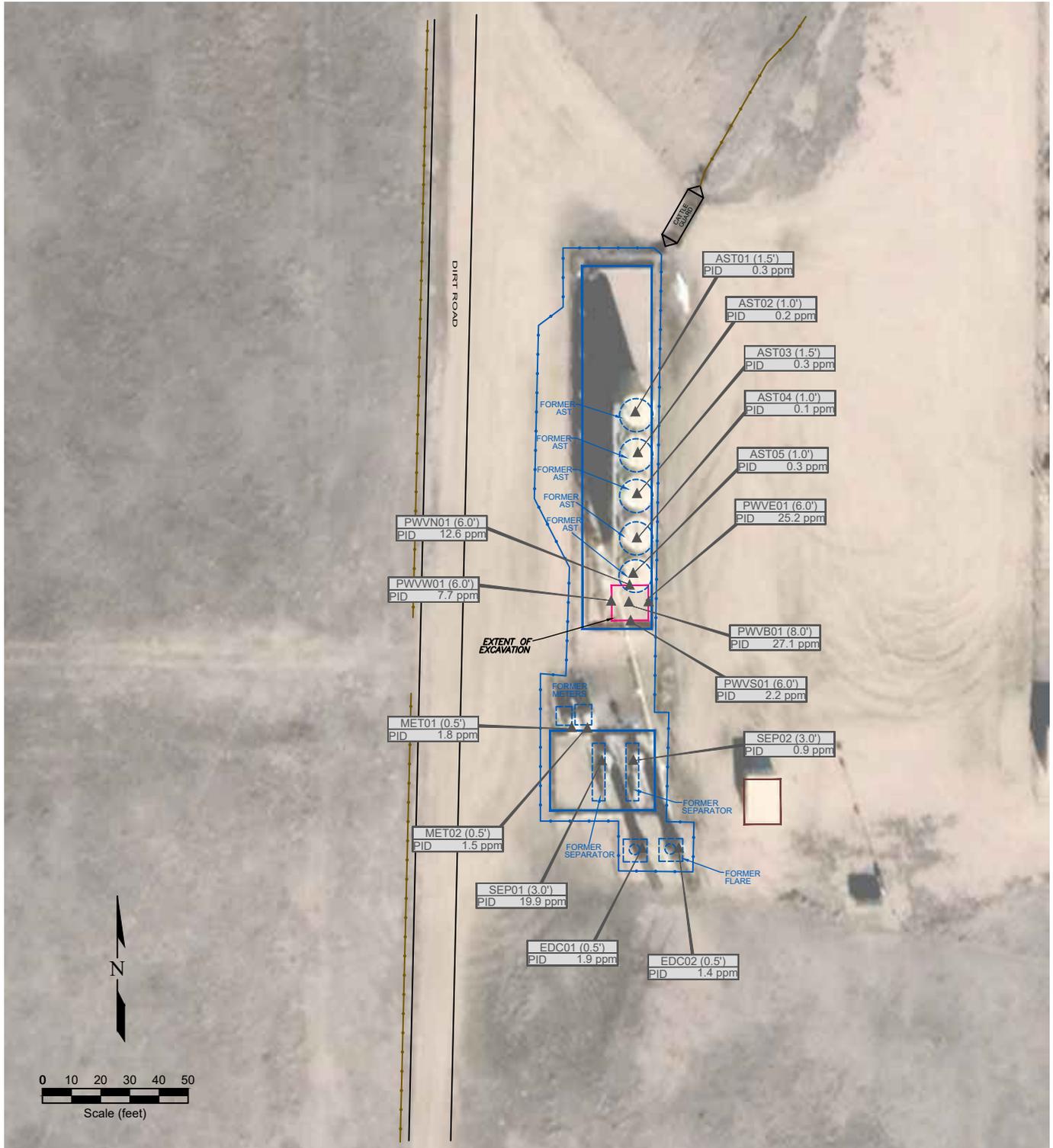
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
**SITE LOCATION MAP**

**Noble Energy, Inc. ~ Ball Ranch AC 15-65HN**  
SWNW Sec. 15, T7N, R63W, 6th PM  
Weld County, Colorado  
40.575290°, -104.429520°

Project # <b>C022-124</b>	API # <b>05-123-35074</b>	Drawn By <b>TA</b>
Date <b>11/29/22</b>	Remediation # <b>23766</b>	Filename <b>22124T</b>





**LEGEND**

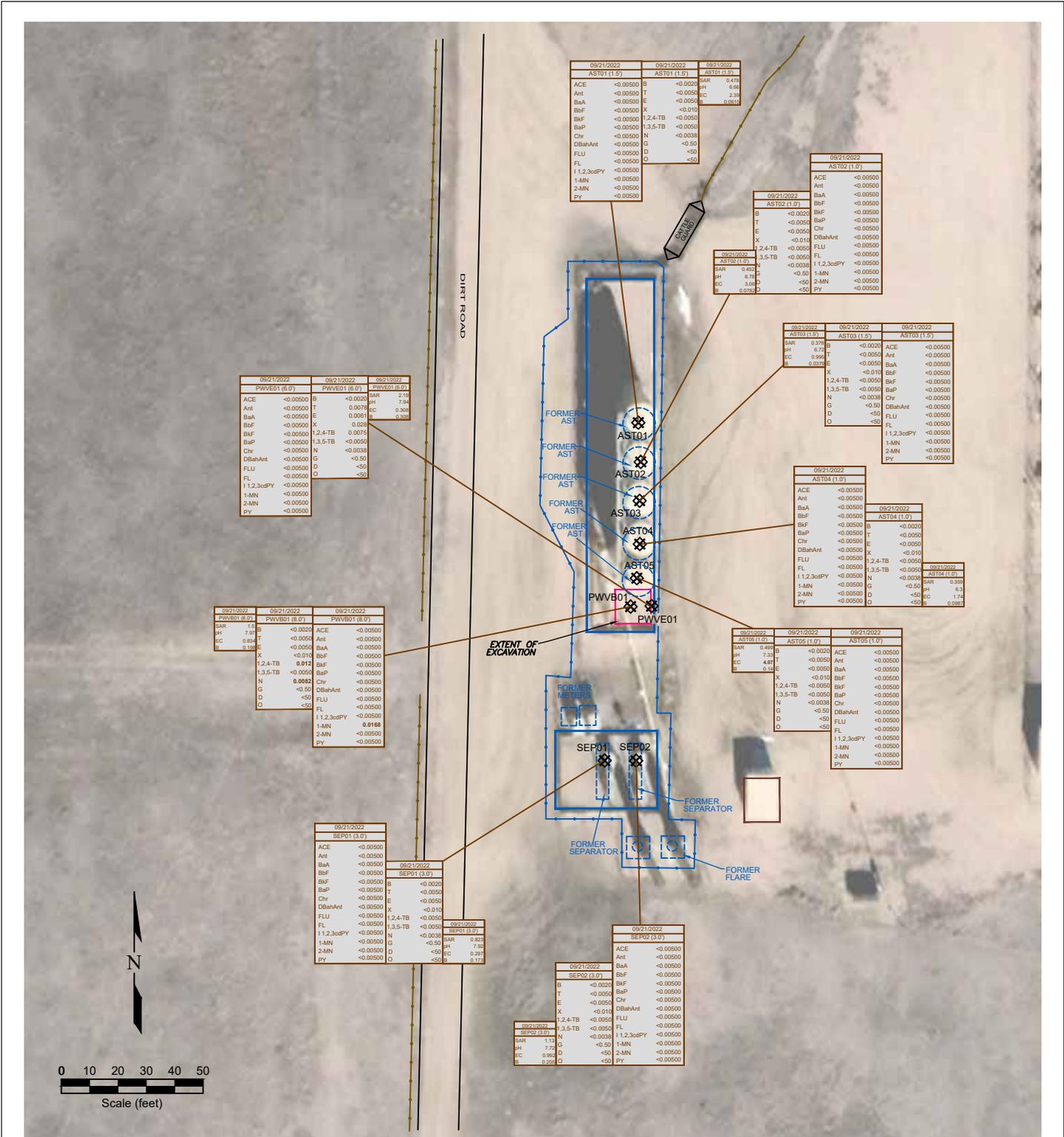
▲ PID READING LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER FACILITY	BUILDING	BUILDING	CONTAINMENT WALL	EXTENT OF EXCAVATION	FENCE LINE
MET01 (0.5') PID 1.8 ppm							
PID READING LOCATION IDENTIFICATION PHOTO IONIZATION DETECTION (ppm)							

**Figure 2  
SITE MAP**

**Noble Energy, Inc. ~ Ball Ranch AC 15-03**  
 NWNW Sec. 15, T7N, R63W, 6th PM  
 Weld County, Colorado  
 40.577687°, -104.430380°

Project No. <b>C022-124</b>	Facility # <b>427188</b>	Drawn By <b>TA</b>
Date <b>12/22/22</b>	Remediation # <b>23764</b>	Filename <b>22124Q</b>





**LEGEND**

- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- BUILDING
- BUILDING
- CONTAINMENT WALL
- EXTENT OF EXCAVATION
- FENCE LINE

09/21/2022	DATE SAMPLED	09/21/2022	DATE SAMPLED
AST01 (1.5')	SAMPLE ID and DEPTH (ft)	AST01 (1.5')	SAMPLE ID and DEPTH (ft)
ACE <0.0050	ACENAPHTHENE (mg/kg)	B <0.0020	BENZENE (mg/kg)
Ant <0.0050	ANTHRACENE (mg/kg)	T <0.0050	TOLUENE (mg/kg)
BaA <0.0050	BENZO (A) ANTHRACENE (mg/kg)	E <0.0050	ETHYL BENZENE (mg/kg)
BbF <0.0050	BENZO (B) FLUORANTHENE (mg/kg)	X <0.010	TOTAL XYLENES (mg/kg)
BbF <0.0050	BENZO (K) FLUORANTHENE (mg/kg)	1,2,4-TB <0.0050	1,2,4-TRIMETHYLBENZENE (mg/kg)
BaP <0.0050	BENZO (A) PYRENE (mg/kg)	1,3,5-TB <0.0050	1,3,5-TRIMETHYLBENZENE (mg/kg)
Chr <0.0050	CHRYSENE (mg/kg)	N <0.0038	NAPHTHALENE (mg/kg)
DBaAnt <0.0050	DIBENZ (A,H) ANTHRACENE (mg/kg)	G <0.50	TPH-GRO (mg/kg)
FLU <0.0050	FLUORANTHENE (mg/kg)	D <0.50	TPH-ORO (mg/kg)
FL <0.0050	FLUORANTHENE (mg/kg)	1,1,2,3cdPY <0.0050	
1,1,2,3cdPY <0.0050	INDENO (1,2,3-CD) PYRENE (mg/kg)	1-MN <0.0050	
1-MN <0.0050	1-METHYLNAPHTHALENE (mg/kg)	2-MN <0.0050	
2-MN <0.0050	2-METHYLNAPHTHALENE (mg/kg)	PY <0.0050	
PY <0.0050	PYRENE (mg/kg)		

**Figure 3**  
**SOIL CHEMISTRY MAP**

**Noble Energy, Inc. ~ Ball Ranch AC 15-03**  
 NWNW Sec. 15, T7N, R63W, 6th PM  
 Weld County, Colorado  
 40.577687°, -104.430380°

Project No. <b>C022-124</b>	Facility # <b>427188</b>	Drawn By <b>TA</b>
Date <b>12/22/22</b>	Remediation # <b>23764</b>	Filename <b>22124Q</b>

5/19/23

Ball Ranch A 15-03

53°F Overcast, Calm

EB (Fremont), Terrence A (DrillPro)

SS-GEN

Depth (ft)	Desc.	Rec %	PID (ppm)
2	ROADBASE 6" CLAY: BRN, PLASTIC, MOIST (CH)		0.0 0.0 0.0
4		50	0.0
6		No REC.	No REC. ↑ ↓
8		10	11.2 *
10	CLAY-MOTTLED, Non-PLASTIC MOIST (CL)		0.0 0.0 0.0
12	OL END OF BORING 12.0'	100	0.0

SS-N

2	CLAY: BRN, PLASTIC, MOIST (CH)		0.0 0.0 0.0
4		95	0.0 0.0
6		98	0.0 0.0
8			0.0
9	CLAY: MOTTLED, Non-PLASTIC, MOIST, (CL) END OF BORING OXIDIZED 9.0'	100	0.0 *

SS-E

2	No RECOVERY		NS NS NS
4		0	0.0 0.0
6	CLAY: BRN, PLASTIC, MOIST (CH)	60	0.0 0.0
8			0.0 0.0
9	CLAY: MOTTLED, Non-PLASTIC, SLIGHTLY (CL) END OF BORING MOIST, OXIDIZED 9.0'	95	0.0 *

5/19/23

Ball Ranch A 15-03

SI Borings

SS-S

Depth (ft)	Desc.	Rec%	PI (ppm)
			NS
			NS
2	CLAY - BRN PLASTIC, MOIST (CH)	10	0.0
4		11	NS
6		50	0.0
			0.0
			0.0
8	CLAY: MOTTLED, NON-PLASTIC, SLTLY MOIST (CL) END OF BORING 9.0'	100	0.0*
9			

SS-W

2	NO RECOVERY		NS
			NS
4	CLAY: BRN, PLASTIC, MOIST (CH)	0	NS
6		90	0.0
			0.0
			0.0
8	CLAY: MOTTLED, NON-PLASTIC, SLTLY (CL) MOIST	100	0.0*
9			

→ END OF BORING 9.0'

• Collected 5 BKG samples see Trimble for details

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

June 05, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Ball Ranch AC 15-04

Work Order # 2305506

Enclosed are the results of analyses for samples received by Summit Scientific on 05/22/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/05/23 12:03

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-CEN 8FT	2305506-01	Soil	05/19/23 00:00	05/22/23 16:30
SS-N 9FT	2305506-02	Soil	05/19/23 00:00	05/22/23 16:30
SS-E 9FT	2305506-04	Soil	05/19/23 00:00	05/22/23 16:30
SS-W 9FT	2305506-05	Soil	05/19/23 00:00	05/22/23 16:30
BKG 1 8FT	2305506-06	Soil	05/19/23 00:00	05/22/23 16:30
BKG 2 9FT	2305506-07	Soil	05/19/23 00:00	05/22/23 16:30
BKG 3 9FT	2305506-08	Soil	05/19/23 00:00	05/22/23 16:30
BKG 4 8FT	2305506-09	Soil	05/19/23 00:00	05/22/23 16:30
BKG 5 9FT	2305506-10	Soil	05/19/23 00:00	05/22/23 16:30

# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2305506	

Client: Fremont Env.	Send Data To: Project Manager: Henehan	Send Invoice To: Company: Noble
Address:	E-Mail: Fremont/Noble Dist. List	Project Name/Location:
City/State/Zip:		AFE#:
Phone:	Project Name: Noble-Ball Ranch AC 15-03	PO/Billing Codes: UWRCU-2002-ABN
Sampler Name: EB	Project Number:	Contact: Dan P.

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, Naphthalene, THBs	TPH (C6-C36)	PAH		SAR, EC, pH, Boron
1	SS-CEN 8 FT	5/19/23		2			X			X			X	X	X	X	
2	SS-N 4 FT																
3	SS-S 4 FT																
4	SS-E 4 FT																
5	SS-W 4 FT																
6	BKG 1 8 FT																
7	BKG 2 4 FT																
8	BKG 3 4 FT																
9	BKG 4 8 FT																
10	BKG 5 4 FT																
11																	
12																	
13																	
14																	
15																	

Relinquished by: <i>G. H. Hook</i>	Date/Time: 5/22/23 16:30	Received by: S2	Date/Time: 5/22/23 16:30	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: S2	Date/Time: 5/22/23 16:30	Received by: <i>[Signature]</i>	Date/Time: 5/22/23 16:30	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.3	Corrected Temperature: 6	IR gun #:			HNO3 lot #	

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2305506

Client: Fremont Client Project ID: Noble-Ball Ranch Ac 1503

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other [ ] Airbill #: [ ]

Matrix (Check all that apply) Air [ ] Soil/Solid [ ] Water [ ] Other [ ]

Temp (°C) 9.3 Thermometer # 1

Table with 5 columns: Yes, No, N/A, Comments (if any). Rows include: If samples require cooling, is the temperature < 6°C? (1), If custody seals are present, are they intact? (1), Are samples due within 48 hours present?, Are water samples with short hold times present?, Is a chain-of-custody (COC) form present and filled out completely? (1), Is the COC properly relinquished by the client w/ date and time recorded? (1), Were all samples received intact? (1), Was adequate sample volume provided? (1), Does the COC agree with the number and type of sample bottles received? (1), Do the sample IDs on the bottle labels match the COC? (1), For volatiles in water - is there headspace present? If yes, contact client and note in narrative., Are samples preserved that require preservation (excluding cooling)? (1), If samples are acid preserved for metals, is the pH <= 2? (1), If dissolved metals are requested, were samples field filtered?

Additional Comments (if any):

(1) If NO, then contact the client before proceeding with analysis and note in case narrative.

AS Custodian Printed Name

5/22/23 Date/Time



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-CEN 8FT**  
**2305506-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/26/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.0060</b>	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.7 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		88.0 %		50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.6 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<i>Surrogate: o-Terphenyl</i>		117 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/05/23 12:03

**SS-CEN 8FT**  
**2305506-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	I-01
Anthracene	ND	0.00500		"	"	"	"	"	"	I-01
<b>Benzo (a) anthracene</b>	<b>0.0219</b>	0.00500		"	"	"	"	"	"	I-01
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	I-01
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	I-01
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	I-01
<b>Chrysene</b>	<b>0.0222</b>	0.00500		"	"	"	"	"	"	I-01
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	I-01
Fluoranthene	ND	0.00500		"	"	"	"	"	"	I-01
Fluorene	ND	0.00500		"	"	"	"	"	"	I-01
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	I-01
<b>Pyrene</b>	<b>0.0400</b>	0.00500		"	"	"	"	"	"	I-01
<b>1-Methylnaphthalene</b>	<b>0.240</b>	0.00500		"	"	"	"	"	"	E, I-01
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	I-01

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		239 %		40-150		"	"	"	"	I-01, S-04, S-GC
Surrogate: Fluoranthene-d10		62.0 %		40-150		"	"	"	"	I-01

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.654</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/05/23 12:03

**SS-CEN 8FT**  
**2305506-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Arsenic</b>	<b>0.804</b>	0.242		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
<b>Barium</b>	<b>70.3</b>	0.484		"	"	"	"	"	"	
Cadmium	ND	0.242		"	"	"	"	"	"	
<b>Copper</b>	<b>2.14</b>	0.484		"	"	"	"	"	"	
<b>Lead</b>	<b>4.81</b>	0.242		"	"	"	"	"	"	
<b>Nickel</b>	<b>1.70</b>	0.484		"	"	"	"	"	"	
Selenium	ND	0.314	0.212	"	"	"	"	"	"	
Silver	ND	0.0242		"	"	"	"	"	"	
<b>Zinc</b>	<b>8.11</b>	0.484		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Calcium</b>	<b>37.7</b>	0.0605		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
<b>Magnesium</b>	<b>15.6</b>	0.0605		"	"	"	"	"	"	
<b>Sodium</b>	<b>38.6</b>	0.0605		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Sodium Adsorption Ratio</b>	<b>1.33</b>	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-CEN 8FT  
 2305506-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	82.7			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.593	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.30			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/05/23 12:03

**SS-N 9FT**  
**2305506-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/26/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		93.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		89.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.7 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		113 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-N 9FT**  
**2305506-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		41.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		40.3 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>1.25</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-N 9FT**  
**2305506-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	0.875	0.249	mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B
Barium	6.39	0.498	"	"	"	"	"	"
Cadmium	ND	0.249	"	"	"	"	"	"
Copper	4.01	0.498	"	"	"	"	"	"
Lead	2.30	0.249	"	"	"	"	"	"
Nickel	3.89	0.498	"	"	"	"	"	"
Selenium	ND	0.324	0.218	"	"	"	"	"
Silver	ND	0.0249	"	"	"	"	"	"
Zinc	16.2	0.498	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 05/19/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: 05/19/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.0	0.0623		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	16.0	0.0623		"	"	"	"	"	"	
Sodium	95.5	0.0623		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 05/19/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.53	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-N 9FT  
 2305506-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>80.3</b>			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>0.728</b>	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>6.92</b>			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-E 9FT**  
**2305506-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/26/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		92.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		89.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		115 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-E 9FT**  
**2305506-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		57.8 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.8 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>1.06</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**SS-E 9FT**  
**2305506-04 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.52	0.245		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	9.29	0.491		"	"	"	"	"	"	
Cadmium	ND	0.245		"	"	"	"	"	"	
Copper	4.65	0.491		"	"	"	"	"	"	
Lead	2.93	0.245		"	"	"	"	"	"	
Nickel	1.07	0.491		"	"	"	"	"	"	
Selenium	0.436	0.319	0.215	"	"	"	"	"	"	
Silver	0.0383	0.0245		"	"	"	"	"	"	
Zinc	7.29	0.491		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.4	0.0613		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	26.1	0.0613		"	"	"	"	"	"	
Sodium	26.6	0.0613		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.738	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**2305506-04 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.5			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.361	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.91			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

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**2305506-05 (Soil)**

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**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		91.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		88.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		113 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**SS-W 9FT**  
**2305506-05 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		59.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.3 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.697</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**2305506-05 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.72	0.248		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	62.8	0.495		"	"	"	"	"	"	
Cadmium	ND	0.248		"	"	"	"	"	"	
Copper	4.51	0.495		"	"	"	"	"	"	
Lead	239	0.248		"	"	"	"	"	"	
Nickel	1.00	0.495		"	"	"	"	"	"	
Selenium	1.64	0.322	0.217	"	"	"	"	"	"	
Silver	0.0550	0.0248		"	"	"	"	"	"	
Zinc	6.70	0.495		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	49.9	0.0619		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	27.5	0.0619		"	"	"	"	"	"	
Sodium	119	0.0619		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.36	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

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**SS-W 9FT**  
**2305506-05 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	80.8			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.06	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.96			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 1 8FT**  
**2305506-06 (Soil)**

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**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		94.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		91.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		119 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 1 8FT**  
**2305506-06 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		53.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.7 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.730</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 1 8FT**  
**2305506-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.09	0.246		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	111	0.492		"	"	"	"	"	"	
Cadmium	ND	0.246		"	"	"	"	"	"	
Copper	3.63	0.492		"	"	"	"	"	"	
Lead	8.38	0.246		"	"	"	"	"	"	
Nickel	3.98	0.492		"	"	"	"	"	"	
Selenium	0.333	0.320	0.215	"	"	"	"	"	"	
Silver	0.0399	0.0246		"	"	"	"	"	"	
Zinc	25.0	0.492		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.3	0.0615		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	24.2	0.0615		"	"	"	"	"	"	
Sodium	16.5	0.0615		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.473	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 1 8FT**  
**2305506-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.3			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.260	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.14			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

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06/05/23 12:03

**BKG 2 9FT**  
**2305506-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		121 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 2 9FT**  
**2305506-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		46.7 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>1.19</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 2 9FT**  
**2305506-07 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.00	0.257		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	33.8	0.515		"	"	"	"	"	"	
Cadmium	ND	0.257		"	"	"	"	"	"	
Copper	4.36	0.515		"	"	"	"	"	"	
Lead	13.9	0.257		"	"	"	"	"	"	
Nickel	0.796	0.515		"	"	"	"	"	"	
Selenium	0.496	0.334	0.225	"	"	"	"	"	"	
Silver	0.0458	0.0257		"	"	"	"	"	"	
Zinc	6.85	0.515		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	12.2	0.0643		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	7.06	0.0643		"	"	"	"	"	"	
Sodium	14.4	0.0643		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.812	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
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**BKG 2 9FT**  
**2305506-07 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	77.7			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.219	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.93			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

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**BKG 3 9FT**  
**2305506-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		96.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		90.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		117 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 3 9FT**  
**2305506-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		58.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.9 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.691</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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 06/05/23 12:03

**BKG 3 9FT**  
**2305506-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.596	0.246		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	18.2	0.492		"	"	"	"	"	"	
Cadmium	ND	0.246		"	"	"	"	"	"	
Copper	4.64	0.492		"	"	"	"	"	"	
Lead	3.34	0.246		"	"	"	"	"	"	
Nickel	0.815	0.492		"	"	"	"	"	"	
Selenium	ND	0.320	0.215	"	"	"	"	"	"	
Silver	0.0477	0.0246		"	"	"	"	"	"	
Zinc	5.24	0.492		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	236	0.0615		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	108	0.0615		"	"	"	"	"	"	
Sodium	142	0.0615		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.92	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 3 9FT**  
**2305506-08 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.3			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	2.46	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.78			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 4 8FT**  
**2305506-09 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		94.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		89.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		111 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 4 8FT**  
**2305506-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.8 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>1.41</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 4 8FT**  
**2305506-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.90	0.253		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	24.3	0.506		"	"	"	"	"	"	
Cadmium	ND	0.253		"	"	"	"	"	"	
Copper	2.74	0.506		"	"	"	"	"	"	
Lead	6.44	0.253		"	"	"	"	"	"	
Nickel	1.60	0.506		"	"	"	"	"	"	
Selenium	1.18	0.329	0.222	"	"	"	"	"	"	
Silver	0.0380	0.0253		"	"	"	"	"	"	
Zinc	14.9	0.506		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	175	0.0633		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	96.6	0.0633		"	"	"	"	"	"	
Sodium	150	0.0633		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.26	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**BKG 4 8FT**  
**2305506-09 (Soil)**

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**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	79.0			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	2.05	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.22			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project Number: [none]  
 Project Manager: Paul Henehan

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**BKG 5 9FT**  
**2305506-10 (Soil)**

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**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0859	05/24/23	05/25/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		93.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		88.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0857	05/24/23	05/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		121 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Ball Ranch AC 15-04

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**BKG 5 9FT**  
**2305506-10 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGE0898	05/25/23	05/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		53.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.5 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.837</b>	0.0100		mg/L	1	BGE0895	05/25/23	05/30/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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**2305506-10 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.25	0.245		mg/kg dry	1	BGE1015	05/30/23	06/01/23	EPA 6020B	
Barium	11.1	0.489		"	"	"	"	"	"	
Cadmium	ND	0.245		"	"	"	"	"	"	
Copper	4.11	0.489		"	"	"	"	"	"	
Lead	6.46	0.245		"	"	"	"	"	"	
Nickel	1.31	0.489		"	"	"	"	"	"	
Selenium	0.514	0.318	0.214	"	"	"	"	"	"	
Silver	0.0455	0.0245		"	"	"	"	"	"	
Zinc	9.93	0.489		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0800	05/23/23	05/23/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	398	0.0611		mg/L dry	1	BGE0981	05/26/23	05/31/23	EPA 6020B	
Magnesium	149	0.0611		"	"	"	"	"	"	
Sodium	206	0.0611		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.24	0.00100		units	1	BGF0092	06/02/23	06/02/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - Ball Ranch AC 15-04

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 Project Manager: Paul Henehan

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**BKG 5 9FT**  
**2305506-10 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.8			%	1	BGE0896	05/25/23	05/25/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	3.30	0.0100		mmhos/cm	1	BGE0996	05/27/23	05/30/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **05/19/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.41			pH Units	1	BGE0995	05/27/23	05/30/23	EPA 9045D	



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Project Number: [none]  
 Project Manager: Paul Henehan

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### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

#### Batch BGE0859 - EPA 5030 Soil MS

##### Blank (BGE0859-BLK1)

Prepared: 05/24/23 Analyzed: 05/25/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0341		"	0.0400		85.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0368		"	0.0400		92.1	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0379		"	0.0400		94.7	50-150			

##### LCS (BGE0859-BS1)

Prepared: 05/24/23 Analyzed: 05/25/23

Benzene	0.0925	0.0020	mg/kg	0.100		92.5	70-130			
Toluene	0.0782	0.0050	"	0.100		78.2	70-130			
Ethylbenzene	0.0774	0.0050	"	0.100		77.4	70-130			
m,p-Xylene	0.149	0.010	"	0.200		74.7	70-130			
o-Xylene	0.0704	0.0050	"	0.100		70.4	70-130			
1,2,4-Trimethylbenzene	0.0758	0.0050	"	0.100		75.8	70-130			
1,3,5-Trimethylbenzene	0.0750	0.0050	"	0.100		75.0	70-130			
Naphthalene	0.0705	0.0038	"	0.100		70.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0309		"	0.0400		77.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0382		"	0.0400		95.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0379		"	0.0400		94.7	50-150			

##### Matrix Spike (BGE0859-MS1)

Source: 2305506-01

Prepared: 05/24/23 Analyzed: 05/25/23

Benzene	0.0979	0.0020	mg/kg	0.100	ND	97.9	70-130			
Toluene	0.0865	0.0050	"	0.100	ND	86.5	70-130			
Ethylbenzene	0.0842	0.0050	"	0.100	ND	84.2	70-130			
m,p-Xylene	0.166	0.010	"	0.200	ND	82.8	70-130			
o-Xylene	0.0785	0.0050	"	0.100	ND	78.5	70-130			
1,2,4-Trimethylbenzene	0.0746	0.0050	"	0.100	ND	74.6	70-130			
1,3,5-Trimethylbenzene	0.0859	0.0050	"	0.100	0.00600	79.9	70-130			
Naphthalene	0.0890	0.0038	"	0.100	ND	89.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0354		"	0.0400		88.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0389		"	0.0400		97.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0372		"	0.0400		93.1	50-150			

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

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 06/05/23 12:03

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE0859 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGE0859-MSD1)</b>	<b>Source: 2305506-01</b>			Prepared: 05/24/23 Analyzed: 05/25/23						
Benzene	0.0972	0.0020	mg/kg	0.100	ND	97.2	70-130	0.677	30	
Toluene	0.0821	0.0050	"	0.100	ND	82.1	70-130	5.16	30	
Ethylbenzene	0.0838	0.0050	"	0.100	ND	83.8	70-130	0.429	30	
m,p-Xylene	0.164	0.010	"	0.200	ND	82.2	70-130	0.782	30	
o-Xylene	0.0788	0.0050	"	0.100	ND	78.8	70-130	0.343	30	
1,2,4-Trimethylbenzene	0.0756	0.0050	"	0.100	ND	75.6	70-130	1.32	30	
1,3,5-Trimethylbenzene	0.0839	0.0050	"	0.100	0.00600	77.9	70-130	2.40	30	
Naphthalene	0.0827	0.0038	"	0.100	ND	82.7	70-130	7.33	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0342</i>		<i>"</i>	<i>0.0400</i>		<i>85.5</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.4</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>94.0</i>	<i>50-150</i>			



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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
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**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BGE0857 - EPA 3550A**

**Blank (BGE0857-BLK1)**

Prepared & Analyzed: 05/24/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	15.2		"	12.5	121	30-150					

**LCS (BGE0857-BS1)**

Prepared & Analyzed: 05/24/23

C10-C28 (DRO)	586	50	mg/kg	500	117	70-130					
Surrogate: <i>o</i> -Terphenyl	15.1		"	12.5	121	30-150					

**Matrix Spike (BGE0857-MS1)**

Source: 2305506-01

Prepared & Analyzed: 05/24/23

C10-C28 (DRO)	417	50	mg/kg	500	35.2	76.4	70-130				
Surrogate: <i>o</i> -Terphenyl	14.7		"	12.5	117	30-150					

**Matrix Spike Dup (BGE0857-MSD1)**

Source: 2305506-01

Prepared & Analyzed: 05/24/23

C10-C28 (DRO)	447	50	mg/kg	500	35.2	82.4	70-130	6.96	20		
Surrogate: <i>o</i> -Terphenyl	14.1		"	12.5	113	30-150					



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Project Number: [none]  
Project Manager: Paul Henehan

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**PAH by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE0898 - EPA 5030 Soil MS**

**Blank (BGE0898-BLK1)**

Prepared & Analyzed: 05/25/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0214</i>		"	<i>0.0333</i>		<i>64.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0300</i>		"	<i>0.0333</i>		<i>89.9</i>	<i>40-150</i>			

**LCS (BGE0898-BS1)**

Prepared & Analyzed: 05/25/23

Acenaphthene	0.0274	0.00500	mg/kg	0.0333		82.2	31-137			
Anthracene	0.0313	0.00500	"	0.0333		94.0	30-120			
Benzo (a) anthracene	0.0282	0.00500	"	0.0333		84.7	30-120			
Benzo (a) pyrene	0.0290	0.00500	"	0.0333		86.9	30-120			
Benzo (b) fluoranthene	0.0287	0.00500	"	0.0333		86.2	30-120			
Benzo (k) fluoranthene	0.0271	0.00500	"	0.0333		81.4	30-120			
Chrysene	0.0293	0.00500	"	0.0333		87.8	30-120			
Dibenz (a,h) anthracene	0.0286	0.00500	"	0.0333		85.8	30-120			
Fluoranthene	0.0284	0.00500	"	0.0333		85.1	30-120			
Fluorene	0.0267	0.00500	"	0.0333		80.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0284	0.00500	"	0.0333		85.1	30-120			
Pyrene	0.0287	0.00500	"	0.0333		86.0	35-142			
1-Methylnaphthalene	0.0222	0.00500	"	0.0333		66.6	35-142			
2-Methylnaphthalene	0.0240	0.00500	"	0.0333		72.0	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0231</i>		"	<i>0.0333</i>		<i>69.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0291</i>		"	<i>0.0333</i>		<i>87.4</i>	<i>40-150</i>			

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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
06/05/23 12:03

**PAH by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE0898 - EPA 5030 Soil MS**

<b>Matrix Spike (BGE0898-MS1)</b>	<b>Source: 2305506-01</b>			<b>Prepared &amp; Analyzed: 05/25/23</b>						
Acenaphthene	0.0267	0.00500	mg/kg	0.0333	ND	80.1	31-137			
Anthracene	0.0121	0.00500	"	0.0333	ND	36.4	30-120			
Benzo (a) anthracene	0.0128	0.00500	"	0.0333	0.0219	NR	30-120			QM-07
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.5	30-120			
Benzo (b) fluoranthene	0.0197	0.00500	"	0.0333	ND	59.0	30-120			
Benzo (k) fluoranthene	0.0137	0.00500	"	0.0333	ND	41.2	30-120			
Chrysene	0.0245	0.00500	"	0.0333	0.0222	6.94	30-120			QM-07
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.9	30-120			
Fluoranthene	0.0155	0.00500	"	0.0333	ND	46.4	30-120			
Fluorene	0.0301	0.00500	"	0.0333	ND	90.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.4	30-120			
Pyrene	0.0193	0.00500	"	0.0333	0.0400	NR	35-142			QM-07
1-Methylnaphthalene	0.0459	0.00500	"	0.0333	0.240	NR	15-130			QM-07
2-Methylnaphthalene	0.0146	0.00500	"	0.0333	ND	43.9	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0235</i>		"	<i>0.0333</i>		<i>70.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0157</i>		"	<i>0.0333</i>		<i>47.1</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BGE0898-MSD1)</b>	<b>Source: 2305506-01</b>			<b>Prepared &amp; Analyzed: 05/25/23</b>						
Acenaphthene	0.0283	0.00500	mg/kg	0.0333	ND	84.8	31-137	5.71	30	
Anthracene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	32.6	30	QM-07
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	0.0219	NR	30-120	38.0	30	QM-07
Benzo (a) pyrene	0.0214	0.00500	"	0.0333	ND	64.2	30-120	18.3	30	
Benzo (b) fluoranthene	0.0319	0.00500	"	0.0333	ND	95.6	30-120	47.4	30	QM-07
Benzo (k) fluoranthene	0.0176	0.00500	"	0.0333	ND	52.8	30-120	24.6	30	
Chrysene	0.0648	0.00500	"	0.0333	0.0222	128	30-120	90.2	30	QM-07
Dibenz (a,h) anthracene	0.0129	0.00500	"	0.0333	ND	38.6	30-120	5.87	30	
Fluoranthene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	23.7	30	
Fluorene	0.0417	0.00500	"	0.0333	ND	125	30-120	32.5	30	QM-07
Indeno (1,2,3-cd) pyrene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	4.92	30	
Pyrene	0.0569	0.00500	"	0.0333	0.0400	50.8	35-142	98.6	30	QM-07
1-Methylnaphthalene	0.230	0.00500	"	0.0333	0.240	NR	15-130	133	50	QM-07
2-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.5	15-130	7.86	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0781</i>		"	<i>0.0333</i>		<i>234</i>	<i>40-150</i>			<i>QM-07</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0198</i>		"	<i>0.0333</i>		<i>59.5</i>	<i>40-150</i>			

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BGE0895 - EPA 3050B**

**Blank (BGE0895-BLK1)**

Prepared: 05/25/23 Analyzed: 05/30/23

Boron ND 0.0100 mg/L

**LCS (BGE0895-BS1)**

Prepared: 05/25/23 Analyzed: 05/30/23

Boron 5.06 0.0100 mg/L 5.00 101 80-120

**Duplicate (BGE0895-DUP1)**

**Source: 2305506-01**

Prepared: 05/25/23 Analyzed: 05/30/23

Boron 0.685 0.0100 mg/L 0.654 4.64 20

**Matrix Spike (BGE0895-MS1)**

**Source: 2305506-01**

Prepared: 05/25/23 Analyzed: 05/30/23

Boron 7.62 0.0100 mg/L 5.00 0.654 139 75-125 QM-05

**Matrix Spike Dup (BGE0895-MSD1)**

**Source: 2305506-01**

Prepared: 05/25/23 Analyzed: 05/30/23

Boron 7.61 0.0100 mg/L 5.00 0.654 139 75-125 0.0419 25 QM-05



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE1015 - EPA 3050B**

**Blank (BGE1015-BLK1)**

Prepared: 05/30/23 Analyzed: 06/01/23

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							

**LCS (BGE1015-BS1)**

Prepared: 05/30/23 Analyzed: 06/01/23

Arsenic	33.2	0.200	mg/kg wet	40.0	82.9	80-120
Barium	40.3	0.400	"	40.0	101	80-120
Cadmium	1.75	0.200	"	2.00	87.4	80-120
Copper	34.5	0.400	"	40.0	86.2	80-120
Lead	22.3	0.200	"	20.0	112	80-120
Nickel	33.9	0.400	"	40.0	84.7	80-120
Selenium	3.40	0.260	"	4.00	85.0	80-120
Silver	1.78	0.0200	"	2.00	88.9	80-120
Zinc	32.6	0.400	"	40.0	81.5	80-120

**Duplicate (BGE1015-DUP1)**

Source: 2305488-21

Prepared: 05/30/23 Analyzed: 06/01/23

Arsenic	0.527	0.216	mg/kg dry	0.614	15.2	20	
Barium	95.8	0.432	"	140	37.2	20	QR-03
Cadmium	0.0527	0.216	"	0.0623	16.5	20	
Copper	1.41	0.432	"	1.77	22.7	20	QR-03
Lead	3.13	0.216	"	3.17	1.44	20	
Nickel	1.88	0.432	"	1.87	0.323	20	
Selenium	ND	0.281	"	ND		20	
Silver	0.0199	0.0216	"	0.0251	23.1	20	QR-03
Zinc	6.30	0.432	"	6.77	7.21	20	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BGE1015 - EPA 3050B**

<b>Matrix Spike (BGE1015-MS1)</b>	<b>Source: 2305488-21</b>			Prepared: 05/30/23		Analyzed: 06/01/23					
Arsenic	11.5	0.216	mg/kg dry	43.2	0.614	25.2	75-125				QM-07
Barium	155	0.432	"	43.2	140	35.8	75-125				QM-07
Cadmium	1.21	0.216	"	2.16	0.0623	53.2	75-125				QM-07
Copper	13.1	0.432	"	43.2	1.77	26.2	75-125				QM-07
Lead	13.1	0.216	"	21.6	3.17	46.0	75-125				QM-07
Nickel	13.6	0.432	"	43.2	1.87	27.0	75-125				QM-07
Selenium	3.22	0.281	"	4.32	ND	74.6	75-125				QM-07
Silver	1.20	0.0216	"	2.16	0.0251	54.5	75-125				QM-07
Zinc	18.4	0.432	"	43.2	6.77	27.0	75-125				QM-07

<b>Matrix Spike Dup (BGE1015-MSD1)</b>	<b>Source: 2305488-21</b>			Prepared: 05/30/23		Analyzed: 06/01/23					
Arsenic	12.5	0.216	mg/kg dry	43.2	0.614	27.5	75-125	8.23	25		QM-07
Barium	155	0.432	"	43.2	140	36.6	75-125	0.241	25		QM-07
Cadmium	1.51	0.216	"	2.16	0.0623	67.1	75-125	22.0	25		QM-07
Copper	14.2	0.432	"	43.2	1.77	28.7	75-125	7.78	25		QM-07
Lead	16.1	0.216	"	21.6	3.17	59.8	75-125	20.5	25		QM-07
Nickel	14.5	0.432	"	43.2	1.87	29.1	75-125	6.42	25		QM-07
Selenium	3.51	0.281	"	4.32	ND	81.2	75-125	8.45	25		QM-07
Silver	1.48	0.0216	"	2.16	0.0251	67.2	75-125	20.6	25		QM-07
Zinc	19.0	0.432	"	43.2	6.77	28.3	75-125	3.04	25		QM-07



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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Hexavalent Chromium by EPA Method 7196 - Quality Control**

**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BGE0800 - 3060A Mod**

**Blank (BGE0800-BLK1)**

Prepared & Analyzed: 05/23/23

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BGE0800-BS1)**

Prepared & Analyzed: 05/23/23

Chromium, Hexavalent      24.1      0.30    mg/kg wet      25.0      96.4      80-120

**Duplicate (BGE0800-DUP1)**

**Source: 2305506-01**

Prepared & Analyzed: 05/23/23

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BGE0800-MS1)**

**Source: 2305506-01**

Prepared & Analyzed: 05/23/23

Chromium, Hexavalent      28.7      0.30    mg/kg dry      30.2      ND      94.8      75-125

**Matrix Spike Dup (BGE0800-MSD1)**

**Source: 2305506-01**

Prepared & Analyzed: 05/23/23

Chromium, Hexavalent      28.7      0.30    mg/kg dry      30.2      ND      95.0      75-125      0.211      20



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 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BGE0981 - General Preparation**

**Blank (BGE0981-BLK1)**

Prepared: 05/26/23 Analyzed: 05/31/23

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BGE0981-BS1)**

Prepared: 05/26/23 Analyzed: 05/31/23

Calcium	4.82	0.0500	mg/L wet	5.00	96.4	70-130
Magnesium	5.93	0.0500	"	5.00	119	70-130
Sodium	6.02	0.0500	"	5.00	120	70-130



Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Ball Ranch AC 15-04 Project Number: [none] Project Manager: Paul Henehan	<b>Reported:</b> 06/05/23 12:03
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**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE0896 - General Preparation**

<b>Duplicate (BGE0896-DUP1)</b>	<b>Source: 2305506-01</b>		<b>Prepared &amp; Analyzed: 05/25/23</b>							
% Solids	87.5		%		82.7			5.58	20	



Fremont Environmental  
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Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch BGE0996 - General Preparation**

**Blank (BGE0996-BLK1)**

Prepared: 05/27/23 Analyzed: 05/30/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGE0996-BS1)**

Prepared: 05/27/23 Analyzed: 05/30/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

**Duplicate (BGE0996-DUP1)**

**Source: 2305506-01**

Prepared: 05/27/23 Analyzed: 05/30/23

Specific Conductance (EC) 0.571 0.0100 mmhos/cm 0.593 3.76 20



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 06/05/23 12:03

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch BGE0995 - General Preparation**

**LCS (BGE0995-BS1)**

Prepared: 05/27/23 Analyzed: 05/30/23

pH	9.02	pH Units	9.18	98.3	95-105
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**Duplicate (BGE0995-DUP1)**

Source: 2305506-01

Prepared: 05/27/23 Analyzed: 05/30/23

pH	7.36	pH Units	7.30	0.819	20
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Ball Ranch AC 15-04

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/05/23 12:03

### Notes and Definitions

- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- S-04 A sample matrix effect prevented complete surrogate recovery.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- I-01 Due to matrix interference, the sample cannot be accurately quantified. The reported result is qualitative.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference